

REMARKS/ARGUMENTS

The Applicant has carefully considered this application in connection with the Examiner's Action and respectfully requests reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicant originally submitted Claims 1-33 in the application. Previously in a election restriction, the Applicants elected Claims 19-33 and canceled Claims 1-18 without prejudice or disclaimer. Presently, the Applicant has amended independent Claim 31, but otherwise has not amended, canceled or added any claims. Accordingly, Claims 19-33 are currently pending in the application.

I. Rejection of Claims 19-27, 31 and 33 under 35 U.S.C. §102

The Examiner has rejected Claims 19-27, 31 and 33 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,586,297 to Uren *et al.* ("Uren"). Independent Claims 19 and 31, in one form or another, include the element of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer. Uren fails to disclose this element.

In direct contrast to that which is claimed, Uren teaches that its germanium-enriched region (what the Examiner points out as feature 230) is more near the bottom surface of the base than the upper surface of the base. (See Fig. 2 of Uren). Accordingly, Uren fails to disclose this claimed element.

Therefore, Uren does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 20-27 and 33 are dependent upon Claims 1

and 31, Uren also cannot be an anticipating reference for Claims 20-27 and 33. Accordingly, the Applicant respectfully requests the Examiner to withdraw the §102 rejection with respect to these Claims.

II. Rejection of Claim 28 under 35 U.S.C. §103

The Examiner has rejected Claim 28 under 35 U.S.C. §103(a) as being unpatentable over Uren in view of U.S. Patent Publication No. 2001/0003667 to Ahn *et al.* (“Ahn”). As indicated above, independent Claims 19 and 31, in one form or another, include the element of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer. As established above, Uren fails to disclose this element. Uren further fails to suggest this element as it teaches just the opposite—that its germanium enriched region is in the middle of the base, or at least closer to the bottom surface of the base than the upper surface of the base. Ahn fails to correct the deficiencies of Uren.

The Examiner is offering Ahn for the sole proposition that the base comprises a uniformly dopes silicon-germanium base. Without even addressing whether Ahn does or does not stand for such a proposition, such a teaching is very different from a teaching or suggestion of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer, as is presently claimed. Accordingly, Ahn, as applied by the Examiner, fails to correct the deficiencies of Uren.

Thus, Uren, individually or in combination with Ahn, fails to teach or suggest the invention recited in independent Claims 19 and 31 and their dependent claims, when considered as a

whole. Therefore, the combination fails to establish a *prima facie* case of obviousness with respect to these claims. Claim 28 is therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claim 28 under 35 U.S.C. §103(a). The Applicant therefore respectfully requests the Examiner withdraw the rejection.

III. Rejection of Claims 29-30 under 35 U.S.C. §103

The Examiner has rejected Claims 29-30 under 35 U.S.C. §103(a) as being unpatentable over Uren in view of U.S. Patent Publication No. 2002/0132438 to Dunn *et al.* ("Dunn"). As indicated above, independent Claims 19 and 31, in one form or another, include the element of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer. As established above, Uren fails to teach or suggest this element. Dunn fails to correct the deficiencies of Uren.

The Examiner is offering Dunn for the proposition that the germanium-enriched region is in contact with the emitter, as well as the proposition that a concentration of germanium in the germanium-enriched region decreases abruptly from a concentration proximate the upper surface in a direction toward the collector. Without even addressing whether Dunn does or does not stand for such propositions, such a teaching is very different from a teaching or suggestion of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer, as is presently claimed. Accordingly, Dunn, as applied by the Examiner, fails to correct the deficiencies of Uren.

Thus, Uren, individually or in combination with Dunn, fails to teach or suggest the invention recited in independent Claims 19 and 31 and their dependent claims, when considered as a whole. Therefore, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claims 29-30 are therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 29-30 under 35 U.S.C. §103(a). The Applicant therefore respectfully requests the Examiner withdraw the rejection.

IV. Rejection of Claim 32 under 35 U.S.C. §103

The Examiner has rejected Claim 32 under 35 U.S.C. §103(a) as being unpatentable over Uren in view of J. Appl. Physics 1989 NPL to LeGoues *et al.* ("Le"). As indicated above, independent Claims 19 and 31, in one form or another, include the element of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer. As established above, Uren fails to teach or suggest this element. Le fails to correct the deficiencies of Uren.

The Examiner is offering Le for the proposition that the germanium-enriched region comprises a thermally oxidized enriched region. Without even addressing whether Dunn does or does not stand for such a proposition, such a teaching is very different from a teaching or suggestion of a germanium-enriched region proximate an upper surface of the base and within the silicon-germanium layer, as is presently claimed. Accordingly, Le as applied by the Examiner, fails to correct the deficiencies of Uren.

Thus, Uren, individually or in combination with Le, fails to teach or suggest the invention recited in independent Claims 19 and 31 and their dependent claims, when considered as a whole. Therefore, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claim 32 is therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claim 32 under 35 U.S.C. §103(a). The Applicant therefore respectfully requests the Examiner withdraw the rejection.

V. Conclusion

In view of the foregoing amendment and remarks, the Applicant now sees all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 19-33.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

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